38. The sequencing method of claim 37 wherein the sequence includes only those task objects falling within the region of influence of the master object.

39. The sequencing method of claim 36 including a plurality of master objects, each of which has a region of influence, wherein at least one master object is responsive to the activation of one or more other master objects to initiate sequencing of task objects within its own control region.

40. The sequencing method of claim 36 further including the steps of selecting a type for each task object from a list of pre-defined types, wherein each master object is programmed to sequence only task objects of certain specified types.

41. The sequencing method of claim 40 further including the step of defining a general type for master objects for sequencing task objects of all types.

Remarks

In accordance with the Examiner's request, Applicant hereby affirms the election of claims 1-25 and the withdrawal, without prejudice, of claims 26-28. Also, in response to the Examiner's request for copies of references cited in the present application, the Applicant will procure additional copies of these references for submittal to the Examiner. Applicant's present copies include copious hand-annotations and, as such, are not suitable for presentation to the Examiner. One reference is out of print and must be ordered; however, Applicant will submit all references as soon as possible. Specifically, Applicant will provide the Examiner with the

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following references: "Rapid Development: Taming Wild Software Schedules," by Steve McConnell, Microsoft Press (1996), and "Workflow Strategies" by James Koblielus, IDG Books Worldwide (1997). The article copy "HELLO, WORLD! ParcPlace - Digitalk's Parts for Java 1.0" in Software Development, February 1997, is included with this response.

Applicant has amended independent claim 1 to more particularly identify the directional attribute associated with the directional field of the present invention as claimed. The Examiner rejected independent claim 1 under 35 U.S.C. 102(e) as being anticipated by Carlson *et al.*. For Carlson *et al.* to anticipate the present invention as claimed under 35 U.S.C. 102(e), Carlson *et al.* must disclose each and every limitation of the present invention as claimed. Carlson does not teach a directional field nor a directional attribute. Figure 8, item 806 of Carlson *et al.* represents a region referred to as a "sequence region" that includes an existing timeline 808 onto which task icons are placed. It is important to note that in Carlson *et al.*, the user is presented with a visible timeline having a predefined sequential direction. Claim 1, as amended above, defines a method for sequencing a plurality of tasks performed or controlled by a computer wherein the task sequence is determined by a changeable directional attribute applied to a group of task objects arranged within a directional field. Because Carlson *et al.* defines a system having a fixed, non-changeable sequence arranged along a single-dimensional timeline, the amended claim 1 is patentably distinct from Carlson *et al.*, and is believed to be in condition for allowance. Thus, claims 2-13 depending from claim 1 are also believed to be in condition for allowance.

The Examiner also rejected independent claim 14 under 35 U.S.C. 102(e) as being anticipated by Carlson *et al.*. The invention of Carlson *et al.* is substantively different from the invention as claimed by Applicant and the Examiner's rejection of claim 14 is traversed. The Examiner specifically refers to the "icon sequence region 806" discussed at column 12, lines 29-31 of the Carlson *et al.* patent, but this icon sequence region is substantially different from the

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directional field of the present invention. The icon sequence region of Carlson *et al.* has a fixed, predefined sequential definition based on the linear, successive arrangement of operation icons within the icon sequence region. The Examiner additionally refers to column 13, lines 31-35 of Carlson *et al.*, wherein the disclosure states, "Other rules may be adopted in alternative embodiments. For example, time line 808 may be vertical, and the general sequencing rule may be up-to-down or down-to-up." Referring to the disclosure of Carlson *et al.*, specifically to column 13, lines 22-41, it is clear that the sequential rules of Carlson *et al.* assume the preexistence of a single-dimensional timeline. The scope of Carlson *et al.* is illustrated in column 13, lines 38-42, wherein the disclosure states, "For the purposes of explanation, it shall be assumed that the sequence rule is left-to-right and that the operation-instrument association rule is that operation icons tire [sic] associated with the device icon to their right." Whether the predefined timeline of Carlson *et al.* is arranged vertically or horizontally is unimportant. The overriding limitation of Carlson *et al.* is that the timeline is predefined with a fixed sequential association and forces the user to arrange icons in successive linear fashion. In Carlson *et al.*, changing the order of operations execution absolutely requires the user to change the successive ordering of icons along the fixed timeline.

The flexibility of the present invention offers dramatic contrast to the limitations of Carlson *et al.*. For convenience, the Examiner is referred to Applicant's specification, page 10, lines 9-17, wherein it is stated that, "The second way to change the sequence of tasks is to change the directional attribute of the spatial field 12. The directional attribute specifies how the tasks are sequenced based on their location in the spatial field 12. For example, in a two-dimensional spatial field 12, a directional attribute can specify the tasks are sequenced from top-right-to-bottom-left based on the corresponding task object's location in the spatial field 12. If the directional attribute were changed to specify a bottom-right-to-top-left sequence, the order of tasks would change even though the task objects 14 all remain in the same location." The

directional field and its controlling directional attribute of the present invention as claimed are clearly distinct from the fixed time line of Carlson *et al.*. Claim 14 is patentably distinct from Carlson *et al.* and is believed to be in condition for allowance. Thus, claims 15-25 depending from claim 14 are also believed to be in condition for allowance.

New independent claim 29 is added to the application. Claim 29 includes the limitation of a directional field having at least two dimensions. In contrast, Carlson *et al.* discloses only a simple timeline with a predefined and single-dimensioned icon sequence. As the directional field has at least two dimensions in claim 29, the spatial associations between task objects, as imparted by the directional attribute, may be quite sophisticated. Indeed, the capabilities for task arrangement and sequencing imparted by a directional field having two or more dimensions and a directional attribute having a corresponding number of dimensions are substantially greater than the pre-defined timeline of Carlson *et al.*. Thus, claim 29 is believed to be patentably distinct from Carlson *et al.* and, therefore, is believed to be in condition for allowance. Therefore, claims 30-41 depending from claim 29 are also believed to be in condition for allowance.

The Examiner additionally rejected claims 2-3 and 7-13 under 35 U.S.C. 103(a) as being unpatentable over Carlson *et al.*. For Carlson *et al.* to make obvious the present invention as claimed, the differences of the subject matter of the present invention and Carlson *et al.* must be such that the subject matter as a whole would have been obvious at the time of the invention to a person having ordinary skill in the art to which the subject matter pertains. Carlson *et al.* does not teach a directional field, much less suggest a user-changeable directional attribute. As claims 2-3 and 7-13 depend from independent claim 1, which is believed to be in condition for allowance, they are also believed to be in condition for allowance.

The Examiner also rejected dependent claims 4-6 under 35 U.S.C. 103(a) as being unpatentable over Carlson *et al.* as applied to claims 1 and 8 respectively, and further in view of

Gendron *et al.* (U.S. Patent 4,860,204). Gendron *et al.* is directed to a workstation that employs methods to construct computer programs through use of visual graphical representations. For convenience, the Examiner is directed to column 6, lines 45+, wherein the disclosure states, "Each Softron includes terminal posts representing the points at which data and control may enter or leave a given module... ". Further, in column 6, lines 51-56, the disclosure of Gendron *et al.* states, "Since the user may select interconnections and primitive building blocks by standard input devices (light pens, electronic lines, touch screens, keyboard pointers) directly from the screen, programming by this method is reduced to joining standard 'building blocks' and indicating how they are to be combined." In short, the data and control terminal posts interconnections of the Softrons are manually interconnected by the user as part of the visual programming process. Indeed, the arrangement of interconnected Softrons disclosed in Gendron *et al.* will more closely resemble a conventional data flow diagram as is commonly used in modern programming. Because Carlson *et al.* does not relate to the use of the data field and Gendron *et al.* does not define the scheme for interconnecting sequential tasks based on spatial relationships, the Examiner's attempt to combine these references does not result in the invention as claimed.

Of further note, the Examiner's rejections of claims 7-13 under 35 U.S.C. 103(a) as being unpatentable over Carlson *et al.* do not consider the significant differences between the master object of the present invention and the disclosure of Carlson *et al.*. For convenience, the Examiner is directed to the present application, page 16, lines 8+. For example, each master object has a region of influence that may have a different directional attribute from other master objects. Task objects within a given master object's region of influence can be sequenced using that master object's directional attribute. Therefore, a given directional field may have multiple, different directional attributes by virtue of containing multiple master objects enclosing various regions of the directional field. Further, each master object includes attributes that selectively

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determine how it interacts with other master objects with regard to task object execution. The "kinetic" and "stacker" icons of Carlson *et al.* are unlike the master objects of the present invention. The Examiner is referred to Carlson *et al.*, column 14, lines 55-62 for a discussion of the kinetic icon and column 15, line 57-61 for a discussion of the stacker icon. Note that claims 19-25 depending from independent method claim 14 relate, in part, to the use of master objects. The same is true for newly added claims 35-41, depending from new independent claim 29.

For the foregoing reasons, it is believed that the application is in condition for allowance and notice to such action is respectfully requested. If any issues remain unresolved, the undersigned attorney would welcome a telephone conference to resolve such issues and expedite allowance of the application. Reconsideration of the amended application is requested.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.
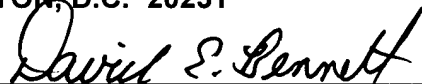
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